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ART UNIT	PAPER NUMBER
2132	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/710,541	CARROLL, CHRISTOPHER PAUL
	Examiner	Art Unit	
	Abdulhakim Nobahar	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 December 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-32</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-32</u> is/are·rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Arguments

1.   This communication is in response to applicant's amendment received on

December 28, 2004.

2.   Amendments to claims 1, 5, 6, 19, 24-27 and 29-32 are acknowledged and that

do not introduce any new matter.

3.   Applicant's arguments have been fully considered and the responses are as

follows.

4.   With respect to newly amended claim 1, applicant on page 10, 2nd paragraph,

argue that: "Marshall does not teach or suggest that the counter or verification value

forms a part of a verification computation enabling the station to authenticate the service

network, as recited in applicant's claim 1... and ... Marshall does not teach or suggest

that information corresponding to the verification value is transmitted from the service

network to the station. Contrary to the Examiner's assertion, transporting a new key

value to the terminals by the KDC does not correspond to transmitting information

corresponding to the verification value from the service network to the station."

Claim 1 has been rejected based on the combined teachings of Aura and

Marshall. Aura teaches that the cryptographic key Ki forms a part of information (i.e.,

entries) in the computations used by algorithms H1, H2, and H3 in both mobile

subscriber and the visited network (Fig. 4; col. 7, lines 13-25). The mobile subscriber

uses the results of the computations to authenticate the visited or the service network.

On the other hand, Marshall teaches as stated in the Office Action dated September 24,

2004, that Ki is provided to the mobile subscriber when the usage counter (i.e., the

adjusting verification value) reaches a certain value. This means that the value of the

usage counter causes that Ki (i.e., Ki depends on usage counter) to be replaced. In

Marshall system, KDC performs like a terminal located in a service network (see Fig. 1).

Therefore, when the teaching of Marshall is implemented in the system of Aura, the

visited VPLMN network would provide a new Ki corresponding to the certain value of

the usage counter to the subscriber (Aura, col. 7, lines 7-12; Fig. 4).

5.   With respect to claim 12, applicant on page 10, 3rd paragraph, argue that:

"Marshall does not teach or suggest receiving at a first terminal (or station) a usage

counter from a second terminal (or service network) and comparing the usage counters

of the two terminals to authenticate the second terminal to the first terminal."

Contrary to the applicant assertion, neither claim 1 nor claim 2 recite the above

language that the result of comparison of two counters is used to authenticate a

terminal. For complete rejection of claim 12 elements, please see the more elaborated

claim rejections below.

6.   With respect to claim 19, applicant on page 11, 2nd paragraph, argue that:

"However, Aura does not teach or suggest in the description of Fig. 3, or in Fig. 3 itself

that a cryptographic primitive is offered by the service network."

On page 2, last paragraph of the specification, applicant states: "using a primitive

cryptographic primitive (e.g., hash function) to generate the response."

Aura teaches that the algorithms (i.e., hash functions) that are used in the

process of authentication are located in both visited network authenticated center

(corresponding to the recited service network) and in the subscriber unit (col. 2, lines

15-18). Aura further teaches that the hash functions are provided to a subscriber by a

center (corresponding to the recited service network) (col. 2, lines 26-36). In Fig. 4, Aura

teaches that MS uses (corresponding to the recited determining) the same hash

functions (H1, H2 and H3) that the visited network authenticated center is uses in order

to compute responses (SRES2) for the visited network (see also col. 4, lines 9-55).

7.   With respect to claim 24, applicant on page 11, last paragraph, argues that:

"However, since the DCK is computed for each particular network, the station does not

store sets of cryptographic information for different service networks, but rather stores

the DCK for one particular network when communicating with that network."

Examiner withdraws the previous rejection of claim 24 and a new rejection of this

claim presented in the claim rejections below.

8.   With respect to claim 32, applicant on page 12, 3rd paragraph, argue that:

"Instead, Aura describes the use of a method (Fig. 4) where the service network and

mobile station do not share algorithms."

Aura teaches that MS and the authentication center (AUC) of the visited network

use the same H1, H2 and H3 algorithms for the purpose of authenticating the MS and

the visited network to each other and instead of the visited network, the AUC performs

the authentication computation (Fig. 4; col. 6, line 30-col. 7, line 46). In the Aura system,

the MS only communicates with the visited network as though the visited network and

the AUC is a single entity. Thus, combination of the visited network and the AUC of

Aura corresponds to the service network of the applicant.

9.   With respect to claim 32, applicant on page 12, last paragraph, argue that: "Aura

in Fig. 3, does not teach a shared secret key K. Nor does Aura, in Fig. 4 teach a shared

cryptographic primitive."

As stated above combination of the visited network and the AUC of Aura system

represent a single entity. The MS uses the same algorithms (H1, H2 and H3) and

shared secret key (Kc) that AUC of the visited network uses (Fig. 4).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19-26, 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Aura (6,711,400 B1).

Aura discloses an authentication method for a telecommunication system that a mobile subscriber is authenticated to both visiting and home networks and vice versa (see, for example, abstract), i.e., the authenticity of the subscriber's identity is verified by the networks and the subscriber checks the authenticity of the networks' identities.

Claim 19

Aura discloses:

determining at the home environment network a cryptographic primitive offered to the home environment by the service network (col. 2, lines 15-18, where the algorithms that are used in the process of authentication are located in both authentication center of the visited network that corresponds to the recited service network and in the subscriber unit that corresponds to the home environment; col. 2, lines 26-36 where the hash functions are provided to a subscriber by a center that corresponds to the recited service network; Fig. 4, where the MS uses the same hash functions that are used in

the authentication center of the visited network in order to compute responses for the

visited network; see also col. 4, lines 9-55); and

based on the determined cryptographic primitive, transmitting to the service

network at least one vector of authentication information corresponding to a particular

station (see, for example, Fig. 4, where MS transmits the vector SRES2 to the visited

network that is used in the authentication process).

Claim 20

Aura discloses:

receiving identification of the cryptographic primitive from the service network

(see, for example, Fig. 4, where RAND2 received by MS at stage 407 which is

generated by the home network using a hash function at stage 404).

Claim 21

Aura discloses:

identification comprises a value of a MODE field (see, for example, Fig. 4, where

SRES1 which is the product of a hash value that represents a value corresponding to

the recited MODE field).

Claim 22

Aura discloses:

the vector authentication information comprises an indication of an authentication

vector sequence number maintained by the home environment network. (see, for

example, Fig. 4, where RAND2, SRES1, SRES2' and Kc are the vector of

authentication information received by the visited network from the home network and

these information are based on Ki which represents the encryption key for the ith mobile

station that corresponds to the ith position of a vector in the sequence a l's values of

vector information)

Claim 23

Aura discloses:

The vector of authentication information comprises a challenge and an expected

response (see, for example, Fig. 4, where the challenge RAND2 at stage 407 is

received by MS and the SRES2 is the expected response).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-18 and 24-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Aura (6,711,400 B1) in view of Marshall et al (4,888,800;

hereinafter Marshall).

Aura discloses an authentication method for a telecommunication system that a

mobile subscriber is authenticated to both visiting and home networks and vice versa

(see, for example, abstract), i.e., the authenticity of the subscriber's identity is verified

by the networks and the subscriber checks the authenticity of the networks' identities.

Marshall discloses a secure communication system that enables two terminals to

transmit secure messages to each other. One of the terminals requests a key

distribution center to provide encryption keys to both terminals, after a link is established

between the two (see, for example, abstract and col. 1, lines 33-49).

Claim 1

Aura discloses:

storing a key at the service network (see, for example, col. 3, lines 1-4; col. 7,

lines 7-12, where the visited network VPLMN corresponds to the recited service

network);

transmitting information to the station from the service network that enables the

station to compute the key stored at the service network (see, for example, col. 7, lines

13-25);

receiving a request for service at the service network from the station (see, for

example, col. 6, lines 16-21);

transmitting information to the station that forms a part of a verification

computation enabling the station to authenticate the service network (col. 7, lines 13-25,

where Ki forms a part of information in the computations used by algorithms H1, H2,

and H3 that are used by the mobile subscriber to authenticate the visited network.)

Aura, however, does not expressly disclose:

adjusting a verification value at each usage of the key; and

transmitting information corresponding to the verification value to the station.

Marshall discloses the use of a counter in association with the usage of an

encryption key by a terminal (corresponding to the recited mobile station). When the

counter reaches a predetermined value a new key is transported to the terminal that

corresponds to the recited transmitting information corresponding to the verification

value to the station (see, for example, abstract; col. 7, lines 15-25).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to implement a key usage counter as taught in Marshall in the

method of Aura because it would provide a means for updating the encryption key (col.

2, lines 10-20) and that in turn would prevent an outsider to eventually gain access to

the encryption keys (col. 6, lines 35-40).

Claim 2

Aura discloses:

receiving a vector of authentication information from the home environment

network of the station, the vector including an indication of the vector's position in a

sequence of vectors (see, for example, Fig. 4, where RAND2, SRES1, SRES2' and Kc

are the vector of authentication information received by the visited network from the

home network and these information are based on Ki which represents the encryption

key for the ith mobile station that corresponds to the ith position of a vector in the

sequence a I's values of vector information); and

transmitting information to the station that enables the station to compute the key

stored at the service network comprises transmitting portions of the received vector of

authentication information (see, for example, Fig. 4, where RAND2 and SRES1 are a

portion of the received vector of authentication information and transmitted to the ith   ·

mobile station to calculate Kc stored also in the visited network).

Claim 3

Aura discloses:

the received vector of authentication information comprises the key stored by the

service network (see, for example, Fig. 4, where the key Kc is received and stored by

the visited network).

Claim 4

Aura discloses:

computing at the service network the key stored by the service network based on

information included in the received vector (see, for example, Fig. 3, where the key DKC

is computed at the visiting network using DCK 1 and DCK2 that in turn are calculated

using the information KS and KS' received from the home network, i.e., the vector).

Claim 5

Marshall discloses:

adjusting a verification value comprises incrementing a sequence number

corresponding to a number of times the key has been used (see, for example, col. 7,

lines 15-25).

Claim 6

Marshall discloses:

the verification value comprises a TSQN (Temporary Sequence Number) (see,

for example, col. 7, lines 21-25, where setting the value of the counter to zero

corresponds to a temporary sequence number).

Claim 7

Aura discloses:

the station comprises a cellular phone; and

the service network and home environment networks comprise cellular networks

(see, for example, col. 1, line 49-col. 2, line 3 and Fig. 1).

Claim 8

Aura discloses:

using the key to compute a cipher key for encrypting communication between the

service network and the station (see, for example, Fig. 3, where the key DCK is

calculated for encrypting communication between the visited network and the mobile

station at stages 327 and 315).

Claim 9

Aura discloses:

negotiating use of a cryptographic primitive between the service network and the

home environment network (see, for example, Fig. 3, where the home network at stage

302 uses the primitive TA11 for calculation of KS and the service network BS uses

primitive TA12 at stage 312 to calculate DCK1 which also calculated by MS at stage

323 using TA12. The calculation of DCK1 at MS is dependent upon the value KS. This

implies that the home network is aware of the primitives used at the BS and based on

this knowledge the home network transmits the required authentication vector to the

visiting network to be used by a specific primitive which corresponds to the recited

negotiating use of a cryptographic primitive...).

Claim 10

Aura discloses:

transmitting a challenge to the station (see, for example, Fig. 4, where the

challenge RAND2 at stage 406 is sent to the MS);

receiving a challenge response from the station (see, for example, Fig. 4, where

the SRES2 at stage 409 is received); and

comparing the received challenge response with an expected response (see, for

example, Fig. 4, stage 409).

Claim 11

Aura discloses:

computing the key stored by the service network at the station (see, for example,

Fig. 4, stage 407, the key Kc is calculated and also stored at the VPLMN).

Aura, however, does not expressly disclose:

receiving the information indicating the value corresponding to key usage at the

station; and

comparing the received value with a value corresponding to key usage

maintained by the station.

Marshall discloses the use of a counter in association with the usage of an

encryption key by a terminal (corresponding to the recited mobile station). When the

counter reaches a predetermined value (corresponding to the recited comparing the

received value with another value for key usage) a new key is transported to the

terminal that corresponds to the recited transmitting information corresponding to the

value to the station (see, for example, abstract; col. 7, lines 15-25).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to implement a key usage counter as taught in Marshall in the

method of Aura because it would provide a means for updating the encryption key (col.

2, lines 10-20) and that in turn would prevent an outsider to eventually gain access to

the encryption keys (col. 6, lines 35-40).

Claim 12

Aura discloses:

A method for use in authenticating a service network to a station, the station

having a home environment network, the method comprising:

receiving information at the station from the service network (see, for example,

Fig. 4, RAND2 and SRES1 at stage 407; col. 7, lines 13-46);

computing a key based on the information received at the station from the

service network, the computed key also being stored by the service network (see, for

example, Fig. 4, Kc at stages 407 and 405; col. 7, lines 9-46);

Aura, however, does not expressly disclose:

maintaining an indicator of key usage at the station;

receiving at the station an indicator of key usage maintained by the service

network; and

comparing the key usage indicator maintained by the service network with the

key usage indicator maintained by the station.

Marshall discloses the use of counters in association with the usage of

encryption keys by both terminals (corresponding to the recited mobile station and

service network) (col. 2, lines 10-20). Marshall further discloses that each terminal

receives a usage counting means that also is maintained by the network (col. 2, lines

36-43; col. 7, lines 10-32; col. 12, lines 12-30). Marshall also discloses that the KDC

(corresponding to the recited service network) provide the mobile station with key

means including a predetermined value (col. 1, line 59-col. 2, line 21). Marshall

discloses that when the counters reach a predetermined value (corresponding to the

recited comparing the indicator of the service network with the indicator of the mobile

station) a new key is transported to the terminal that corresponds to the recited

transmitting information corresponding to the value to the station (see, for example,

abstract; col. 2, lines 8-21; col. 7, lines 15-25).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to implement a key usage counter as taught in Marshall in the

method of Aura because it would provide a means for updating the encryption key (col.

2, lines 10-20) and that in turn would prevent an outsider to eventually gain access to

the encryption keys (col. 6, lines 35-40).

Claim 13

Aura discloses:

maintaining an authentication vector sequence number at the station (see, for

example, col. 8, line 65-col. 9, line 2);

receiving at the station from the service network an indication of an

authentication vector sequence number maintained by the home environment network

(see, for example, Fig. 4, where SRES1 is received by the MS from VPLMN at stage

407 which is kept at HLR/AUC; and

comparing the authentication vector sequence number maintained by the home

environment network with the received authentication vector sequence number

maintained by the station (see, for example, Fig. 4, where SRES1 maintained by the

home network is compared with SRES1' maintained by the MS at stage 408).

Claim 14

Aura discloses:

receiving from the service network identification of a cryptographic primitive (see,

for example, Fig. 4, where RAND2 received by MS at stage 407 which is generated by

the home network using a hash function at stage 404).

Claim 15

Aura discloses:

the station comprises a cellular phone; and

the service network and home environment networks comprise cellular networks

(see, for example, col. 1, line 49-col. 2, line 3 and Fig. 1).

Claim 16

Aura discloses:

using the key to compute a cipher key for encrypting communication between the

service network and the station (see, for example, Fig. 3, where the key DCK is

calculated for encrypting communication between the visited network and the mobile

station at stages 327 and 315).

Claim 17

Aura discloses:

receiving a challenge from the service network (see, for example, Fig. 4, where

the challenge RAND2 at stage 407 is received by MS);

determining a challenge response (see, for example, Fig. 4, where at stage 407

SRES2 is computed); and

transmitting the challenge response to the service network (see, for example,

Fig. 4, where SRES2 is transmitted to VPLMN at stage 409).

Claim 18

Marshall discloses the use of a counter in association with the usage of an

encryption key by a terminal (corresponding to the recited mobile station) (see, for

example, abstract; col. 7, lines 15-25).

Claim 24

Aura discloses that a cryptographic key is computed each time a MS is

establishing communication with a visited network (Fig. 4, where the Kc is calculated by

both MS and the AUC of the visited network). Aura, however does not expressly

disclose:

storing different sets of cryptographic information for the different respective

service networks;

selecting one of the sets of cryptographic information for one of the service

networks; and

using the one selected set of cryptographic information to communicate with the

one service network.

Marshall teaches a system that each terminal stores various keys and their

associated counters for communication with other terminals or a KDC (col. 4, lines 25-

34; col. 14, lines 5-28).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to implement the storage of various cryptographic keys and their

usage counters as taught in Marshall in the method of Aura because a terminal would

be able to have secure communications with other terminals (corresponding to the

recited service networks) (Marshall, col. 1, lines 40-49).

Claim 25

Aura discloses:

the sets of cryptographic information comprise a key shared by the station and

the service network (see, for example, Fig. 3, where the cryptographic key DCK is used

by both MS and the visiting network for communicating with each other).

Claim 26

Aura discloses:

computing the key shared by the station and the service network based on

information received from the service network (see, for example, Fig. 3, where at stage

327 the cryptographic key DCK is computed based on the DCK1 and DCK2 that are in

turn computed based on KS and KS'. The KS and KS' are calculated based on RS

received from the service network. Thus, DCK is based on the RS).

Claim 27

Aura does not expressly disclose:

the sets of cryptographic information comprise an indicator of usage of the key

Marshall discloses the use of counters indicating the usage of encryption keys by

both terminals (corresponding to the recited mobile station and service network) (see,

for example, col. 7, lines 15-25).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to implement a key usage counter as taught in Marshall in the

method of Aura because it would provide a means for updating the encryption key (col.

2, lines 10-20) and that in turn would prevent an outsider to eventually gain access to

the encryption keys (col. 6, lines 35-40).

Claim 28

Marshall discloses the use of a counter in association with the usage of an

encryption key by each terminal (corresponding to the recited mobile station and visiting

network) (see, for example, abstract; col. 7, lines 15-25).

Claim 29

Marshall discloses the use of counters in association with the usage of

encryption keys by both terminals (corresponding to the recited mobile station and

service network). When the counters reach a predetermined value (corresponding to the

recited comparing the indicator of the service network with the indicator of the mobile

station) a new key is transported to the terminal that corresponds to the recited

transmitting information corresponding to the value to the station (see, for example,

abstract; col. 7, lines 15-25).

Claim 30

Aura discloses:

using the selected set of cryptographic information comprises using the selected

set cryptographic information to authenticate the service network (see, for example, Fig.

4, where the cryptographic key Ki is selected by the MS to calculate SRES1' in order to

authenticate the visiting network at stage 408).

Claim 31

Aura discloses:

using the selected set cryptographic information comprises using the selected set

of cryptographic information in encrypting communication between the station and the

service network (see, for example, Fig. 4, where the cryptographic key Kc is selected for

encrypting communication between the station and the service network).

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aura (6,711,400 B1) in view of Marshall et al (4,888,800; hereinafter Marshall) and further in view of Maupin (6,600,917 B1).

Claim 32

Aura discloses:

determining whether the home environment and the service network share a cryptographic primitive offered by the service network (col. 2, lines 15-18, where the algorithms that are used in the process of authentication are located in both authentication center that corresponds to the recited service network and in the subscriber unit that corresponds to the home environment; col. 2, lines 26-36 where the hash functions are provided to a subscriber by a center that corresponds to the recited service network; Fig. 4, where the MS uses the same hash functions that are used in the authentication center of the visited network in order to compute responses for the visited network; see also col. 4, lines 9-55);

computing a shred secret key (SSK) (see, for example, Fig. 4, where the cryptographic key Kc is computed at the visited network's AUC);

transmitting information from the service network to the station that enables the station to compute the SSK (see, for example, Fig. 4, where RAND2 and SRES1 are transmitted to the MS by the visited network to calculate shared Kc).

Aura, however, does not expressly disclose that if it is determined that the home and visited networks do not share a cryptographic primitive, the 3GPP AKA is used for authentication operation between the mobile station and the visiting network.

Maupin teaches a telecommunication system that a base station (corresponding to the recited service network) transmits a message to inform mobile units of the type of services supported by the base station (see, for example, abstract; col. 2, line 64-col. 3, line 12). Maupin further discloses that based on the message that is received from the base station a mobile unit decides on the use of an available technology such as third generation technology corresponding to the 3GPP AKA, which is capable of using it for communication with a base station (see, for example, col. 1, line 64-col. 2, line 11; col. 2; lines 21-38; col. 2; line 64-col. 3, lines 12; col. 3, lines 21-47). This process corresponds to the recited determining whether to use a 3 GPP AKA technology or a shared cryptographic primitive between a home network and a service network, because a mobile unit only capable of using a technology that its home environment network uses.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the process of determining to use a 3GPP AKA technology or a shared cryptographic primitive as taught in Maupin in the system of Aura, because it would enable the mobile unites to quickly determine what type of technology is available to them (col. 2, lines 57-61).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdulhakim Nobahar whose telephone number is 571-272-3808. The examiner can normally be reached on M-T 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
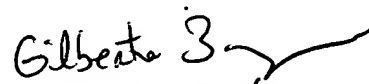
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abdulhakim Nobahar
Examiner
Art Unit 2132

AN

March 23, 2005

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